

Please add the following new claims:

Sub 52 7  
--85. A gas generating composition according to claim 1, wherein said composition is formulated to include a release agent.

Sub 52 1  
86. A gas generating composition as defined in claim 85, wherein the complex is selected from the group consisting of metal nitrite amines, metal nitrate amines, metal perchlorate amines, and mixtures thereof.

87. A gas generating composition as defined in claim 85, wherein the metal cation is a transition metal, alkaline earth metal, metalloid, or lanthanide metal cation.

88. A gas generating composition as defined in claim 87, wherein the transition metal cation is a cobalt cation.

89. A gas generating composition as defined in claim 87, wherein the metal cation is a cation of a metal selected from the group consisting of cobalt, magnesium, manganese, nickel, titanium, copper, chromium, zinc, tin, rhodium, iridium, ruthenium, palladium and platinum.

90. A gas generating composition as defined in claim 85, wherein the oxidizing anion is selected from the group consisting of nitrate, nitrite, chlorate, perchlorate, peroxide and superoxide.

91. A gas generating composition as defined in claim 85, wherein the oxidizing anion is free of carbon.

92. A gas generating composition as defined in claim 85, further comprising a binder.

93. A gas generating composition as defined in claim 92, wherein the binder is water soluble.

94. A gas generating composition as defined in claim 93, wherein the binder is selected from naturally occurring gums, polyacrylic acids, and polyacrylamides.

95. A gas generating composition as defined in claim 92, wherein the binder is not water soluble.

96. A gas generating composition as defined in claim 92, wherein the binder is selected from nitrocellulose, VAAR (vinyl acetate vinyl alcohol resin), and nylon.

97. A gas generating composition as defined in claim 85, wherein the complex is hexamminecobalt (III) nitrate ( $[\text{NH}_3)_6\text{Co}](\text{NO}_3)_3$ ) and the composition further includes copper (II) trihydroxy nitrate ( $\text{Cu}_2(\text{OH})_3\text{NO}_3$ ).

98. A gas generating composition as defined in claim 85, wherein the complex includes at least one common ligand, in addition to the ammonia ligand.

99. A gas generating composition as defined in claim 98, wherein the common ligand is selected from the group consisting of aquo ( $\text{H}_2\text{O}$ ), hydroxo ( $\text{OH}$ ), perhydroxo ( $\text{O}_2\text{H}$ ), peroxy ( $\text{O}_2$ ), carbonato ( $\text{CO}_3$ ), carbonyl ( $\text{CO}$ ), oxalato ( $\text{C}_2\text{O}_4$ ), nitrosyl ( $\text{NO}$ ), cyano ( $\text{CN}$ ), isocyanato ( $\text{NC}$ ), isothiocyanato ( $\text{NCS}$ ), thiocyanato ( $\text{SCN}$ ), amido ( $\text{NH}_2$ ), Imido ( $\text{NH}$ ), sulfato ( $\text{SO}_4$ ), chloro ( $\text{Cl}$ ), fluoro ( $\text{F}$ ), phosphato ( $\text{PO}_4$ ), and ethylenediaminetetraacetic acid (EDTA) ligands.

100. A gas generating composition as defined in claim 85, wherein the complex includes a common counter ion in addition to the oxidizing anion.

101. A gas generating composition as defined in claim 100, wherein the common counter ion is selected from the group consisting of hydroxide ( $\text{OH}^-$ ), chloride ( $\text{Cl}^-$ ), fluoride ( $\text{F}^-$ ), cyanide ( $\text{CN}^-$ ), thiocyanate ( $\text{SCN}^-$ ), carbonate ( $\text{CO}_3^{2-}$ ), sulfate ( $\text{SO}_4^{2-}$ ), phosphate ( $\text{PO}_4^{3-}$ ), oxalate ( $\text{C}_2\text{O}_4^{2-}$ ), borate ( $\text{BO}_4^{5-}$ ), and ammonium ( $\text{NH}_4^+$ ) counter ions.

102. A gas generating composition as defined in claim 85, wherein said composition is formulated from ingredients comprising:

- at least one complex of
  - a metal cation
  - at least one ammonia ligand, and
  - sufficient oxidizing anion to balance the charge of the metal complex
- wherein said composition contains about 50% to about 80% by weight of said complex and said anion; <sup>and</sup> said <sup>said</sup> release agent.

103. A gas generating composition as defined in claim 85, further comprising a co-oxidizer.

104. A gas generating composition as defined in claim 103, wherein the co-oxidizer is selected from the group consisting of alkali, alkaline earth, lanthanide of ammonium perchlorates, chlorates peroxides, nitrites and nitrates.

105. A gas generating composition as defined in claim 103, wherein the co-oxidizer is selected from the group consisting of metal oxides, metal hydroxides, metal peroxides, metal oxide hydrates, metal oxide hydroxides, metal hydrous oxides, basic metal carbonates, basic metal nitrates, and mixtures thereof.

106. A gas generating composition as defined in claim 103, wherein the co-oxidizer is selected from the group consisting of oxides of copper, cobalt, manganese, tungsten bismuth, molybdenum, and iron.

107. A gas generating composition as defined in claim 103, wherein the co-oxidizer is a metal oxide selected from the group consisting of  $\text{CuO}$ ,  $\text{Co}_2\text{O}_3$ ,  $\text{Co}_3\text{O}_4$ ,  $\text{CoFe}_2\text{O}_4$ ,  $\text{Fe}_2\text{O}_3$ ,  $\text{MoO}_3$ ,  $\text{Bi}_2\text{MoO}_6$ , and  $\text{Bi}_2\text{O}_3$ .

108. A gas generating composition as defined in claim 103, wherein the co-oxidizer is a metal hydroxide selected from the group consisting of  $\text{Fe}(\text{OH})_3$ ,  $\text{Co}(\text{OH})_3$ ,  $\text{Co}(\text{OH})_2$ ,  $\text{Ni}(\text{OH})_2$ ,  $\text{Cu}(\text{OH})_2$ , and  $\text{Zn}(\text{OH})_2$ .

109. A gas generating composition as defined in claim 103, wherein the co-oxidizer is a metal oxide hydrate or metal hydrous oxide selected from the group consisting of  $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$ ,  $\text{SnO}_2 \cdot x\text{H}_2\text{O}$ , and  $\text{MoO}_3 \cdot \text{H}_2\text{O}$ .

110. A gas generating composition as defined in claim 103, wherein the co-oxidizer is a metal oxide hydroxide selected from the group consisting of  $\text{CoO}(\text{OH})_2$ ,  $\text{FeO}(\text{OH})_2$ ,  $\text{MnO}(\text{OH})_2$ , and  $\text{MnO}(\text{OH})_3$ .

111. A gas generating composition as defined in claim 103, wherein the co-oxidizer is a basic metal carbonate selected from the group consisting of  $\text{CuCO}_3$ ,  $\text{Cu}(\text{OH})_2$  (malachite),  $2\text{Co}(\text{CO}_3) \cdot 3\text{Co}(\text{OH})_2 \cdot \text{H}_2\text{O}$ ,  $\text{Co}_{0.69}\text{Fe}_{0.34}(\text{CO}_3)_{0.2}(\text{OH})_2$ ,  $\text{Na}_3[\text{Co}(\text{CO}_3)_3] \cdot 3\text{H}_2\text{O}$ ,  $\text{Zn}_2(\text{CO}_3)(\text{OH})_2$ ,  $\text{Bi}_2\text{Mg}(\text{CO}_3)_2(\text{OH})_4$ ,  $\text{Fe}(\text{CO}_3)_{0.12}(\text{OH})_{2.76}$ ,  $\text{Cu}_{1.54}\text{Zn}_{0.46}(\text{CO}_3)(\text{OH})_2$ ,  $\text{Co}_{0.49}\text{Cu}_{0.51}(\text{CO}_3)_{0.43}(\text{OH})_{1.1}$ ,  $\text{Ti}_3\text{Bi}_4(\text{CO}_3)_2(\text{OH})_2\text{O}_9(\text{H}_2\text{O})_2$ , and  $(\text{BiO})_2\text{CO}_3$ .

112. A gas generating composition as defined in claim 103, wherein the co-oxidizer is a basic metal nitrate selected from the group consisting of  $\text{Cu}_2(\text{OH})_3\text{NO}_3$ ,  $\text{Co}_2(\text{OH})_3\text{NO}_3$ ,  $\text{CuCo}(\text{OH})_3\text{NO}_3$ ,  $\text{Zn}_2(\text{OH})_3\text{NO}_3$ ,  $\text{Mn}(\text{OH})_2\text{NO}_3$ ,  $\text{Fe}_4(\text{OH})_{11}\text{NO}_3 \cdot 2\text{H}_2\text{O}$ ,  $\text{Mo}(\text{NO}_3)_2\text{O}_2$ ,  $\text{BiONO}_3 \cdot \text{H}_2\text{O}$ , and  $\text{Ce}(\text{OH})(\text{NO}_3)_3 \cdot 3\text{H}_2\text{O}$ .

113. A gas generating composition as defined in claim 85, further comprising a carbon powder present from 0.1% to 6% by weight of the gas generating composition.--